ASSESSMENT OF DEQ UPLANDS SOURCE CONTROL EFFORTS AT THE PORTLAND HARBOR SUPERFUND SITE APRIL 2015

In December 2005 the Oregon Department of Environmental Quality (DEQ) and EPA Region 10 formally signed onto the Portland Harbor Joint Source Control Strategy (JSCS), a blue print for the processes of identifying, evaluating, and controlling "sources of contamination that may impact the Willamette River in a manner that is consistent with the objectives and schedule for the Portland Harbor remedial investigation and feasibility study." Under the JSCS, "DEQ, using state cleanup authority, has lead technical and legal responsibility for the upland contamination and for coordinating with EPA on upland contamination which may impact the river." It was further noted within the JSCS that "timely upland source control is necessary so that cleanup of the river can proceed without risk of significant recontamination." As EPA approaches determining and selecting in-water remedial actions for the Portland Harbor Superfund Site, DEQ has developed and submitted an Upland Source Control Summary Report (Summary Report: November 2014) to summarize Portland Harbor upland investigations, source control evaluations, and source control measures performed under DEQ's state cleanup authorities at the Portland Harbor.

The Summary Report provides an assessment of source control efforts at sites/facilities within nine geographic regions. In this internal report and the attached spreadsheet the EPA review team's current findings/issues/concerns and recommendations to management are summarized using these same geographic regions. Please note that in reviewing source control work, two primary factors were considered in assessing the current status of DEQ's efforts:

1) As per the JSCS agreement, DEQ can only require cleanup within its authorities as per State law.
2) Limited to no source control measure(s) effectiveness monitoring data has been provided on most sites/facilities work so this EPA assessment of DEQ efforts, like the Summary Report itself, is primarily qualitative in nature.

From an EPA Superfund Program perspective, while a few DEQ projects at Portland Harbor could potentially be listed on the National Priorities List on their own merit based on the nature and extent of historic contamination, most of the projects that DEQ has undertaken are either Brownfields-type cleanups or active industrial/commercial facilities that operate under other or no environmental permitting authorities. There are also a number of petroleum-based operations that DEQ is evaluating under the JSCS that would not normally fall under EPA's Superfund Remedial Program purview.

Noted as a theme in the attached spreadsheet, there is an overall lack of source control measures' effectiveness monitoring for uplands source control work at the Portland Harbor. EPA has been in discussions with DEQ on this concern for most of the past year. Currently, DEQ is working with the City of Portland (CoP) Bureau of Environmental Services (BES) on developing a monitoring plan for select CoP outfalls. This work when implemented should provide quantitative data on the threat of some outstanding site/facility stormwater projects for recontamination potential to the future in-water remedies. It is recommended that EPA management provide any support possible to these ongoing planning efforts so that this monitoring can be implemented in a timely fashion.

Many DEQ site/facility projects that are currently lagging in advancement and implementation of any necessary source control measures are being evaluated only for the stormwater pathway to the River. For evaluating this pathway, DEQ's source control efforts go above and beyond any requirements under the current Clean Water Act (CWA) 1200-Z permit for stormwater in place at many of the subject facilities.

(Please note that DEQ should be commended for their work on the stormwater pathway evaluation at sites/facilities that have completed this work.) It is recommended that EPA management support and provide assistance, as appropriate, to advance any of these lagging projects so that source control measures as well as Source Control Decisions (SCDs) can be in place prior to EPA's Record of Decision (ROD). As noted above, timely completion of initial BES monitoring at select CoP outfalls could assist in focusing source control efforts and pushing implementation of stormwater source control measures at recalcitrant projects.

Historical sources dating back to the early 1900s contributed in part to the observed contaminant distributions in sediments within the Study Area. Land alterations over time were a significant aspect of the development of Portland Harbor into the industrial area that it has been for over a century and still is today; these land alternations provide an added level of complexity in assessing contaminants nature and extent in an already complex study area. All historical sources may never be known and potential sources will likely continue to be discovered well into the future at Portland Harbor. These factors indicate the importance of longterm monitoring to assess the effectiveness of DEQ uplands source control actions. DEQ's conclusions in the Summary Report are for the most part based on qualitative evaluations as limited monitoring of source control measures effectiveness has been performed to date. EPA and DEQ will need to continue discussions on the future need for quantitative recontamination evaluations, as deemed necessary, develop an agreed-upon methodology for recontamination evaluations, and determine the data needs from a longterm monitoring program for future recontamination evaluations.

There are a few facilities/sites at Portland Harbor that are under EPA-led actions; since these are under the purview of EPA, they are summarized below with any recommendations provided herein for management assistance:

Superfund Sites -- Remedial actions have been completed and effectiveness monitoring is occurring at the Gould and McCormick and Baxter sites. The latest Five-Year Reviews and recent monitoring reports for each of these Superfund sites indicate that the remedial actions completed are effective in protecting public health and the environment, including the Willamette River. DEQ assigns both sites as low recontamination threats to the future in-water remedies and EPA is in agreement with their position.

Resource Conservation & Recovery Act (RCRA) Facility -- The Univar facility (ECSI #330)[1] is under a RCRA corrective action order. Efforts on source control measures for the stormwater pathway at this facility have made limited progress in the past few years as no formally-assigned Region 10 RCRA Project Manager has been in place to oversee the owner/operator's efforts. DEQ recently informed EPA staff that they will attempt to work directly with the owner/operator to address outstanding stormwater pathway evaluation concerns and the need for potential stormwater source control measures as identified by both DEQ and BES (ie., facility stormwater discharges to CoP OF-18). DEQ assigns this facility as a medium recontamination threat to the in-water remedies due to the outstanding stormwater issues and EPA is in agreement with their asssessment.

Federal Facilities -- The Corps of Engineers U.S. Moorings facility (1641) is under EPA purview and actions to address potential erosion of contaminated soils are in the planning stages. The Corps has also installed filters as a best management practice (BMP) for stormwater management based on the results of recent CWA 1200-Z permit monitoring; BES has raised concerns over the effectiveness of

[1] ECSI #xxx is the DEQ Environmental Cleanup Site Information number that is assigned to sites in the DEQ Cleanup Program. From this point onward in the report, the ECSI number will be noted in parentheses after the site name.

the filters and is working with the Corps on their 1200Z Tier II compliance issues. The need for a stormwater evaluation following DEQ guidance is also in question for this facility as identified by DEQ; EPA has not yet spoken to the Corps on this issue and it is recommended that EPA management determine whether to approach Corps management in the near future to address this data gap. DEQ also identified the U.S. Navy and Marine Corps Reserve Center (NMCRC: 5109) on Swan Island Lagoon as a facility with the need for a stormwater evaluation. The Navy had not responded favorably to previous DEQ source control assessment requests so EPA has been asked by DEQ to step in; no EPA resources have been allocated to this effort to date and it is recommended that an EPA management decision on a path forward for this facility be made. DEQ assigns both of these facilities as medium recontamination threats to the in-water remedies due in part to the outstanding stormwater issues. EPA is in agreement with their assessment for the U.S. Moorings facility pending implementation/completion of planned source control measures and addressing Tier II 1200-Z permit requirements as well as the data gaps need for a stormwater evaluation. However, EPA questions DEQ's recontamination assessment for the NMCRC and addresses this below.

A review of DEQ site files and the 104(e) submittal for the NMCRC indicated limited historical use of any hazardous substances/materials on the facility. In 1993 a bilge water storage tank and TPH-contaminated soils removal was completed and closed out under DEQ oversight. However, an early 2000s DEQ inspection noted an oily sheen in water near the site of the former storage tank, leading to concerns of potential riverbank cleanup needs; DEQ has identified this riverbank to EPA for assessment and consideration during potential in-water remedial actions within Swan Island Lagoon. Air photos indicate that the existing facility is mainly one large office-type building, parking lots, and limited landscaped areas with small structures and a dock at the lagoon waterfront. The facility would pose only nonpoint source runoff and is, therefore, not covered under CWA stormwater permitting. Furthermore, DEQ records do not indicate a stormwater outfall related to the facility but show multiple outfalls at the adjacent US Coast Guard facility (1338), which has completed stormwater evaluations and stormwater BMPs work. Based on this EPA assessment, the NMCRC should be considered to have low recontamination potential. However, as noted above, EPA has been asked by DEQ to step in and no EPA resources have been allocated to this effort to date so it is recommended that EPA management decide on a path forward to address the stormwater evaluation data gap at this facility.

University of Portland (UoP) – Contaminated soils at the UoP Triangle Park site (277) have been addressed via removal actions and capping performed in 2012. Site redevelopment efforts are moving slowly based on UoP's needs to raise additional project funding. EPA notes that no outstanding uplands source control issues are present at this site, aside from coordinating with the UoP during redevelopment efforts to assure that caps are not adversely impacted by redevelopment work. DEQ assigns this site as a low recontamination threat to the in-water remedies and EPA is in agreement with their asssessment.

EPA's evaluation of the status of various facilities/sites in DEQ's Voluntary Cleanup Program for the Portland Harbor is provided below with detailed comments/concerns/needs provided in the attached spreadsheet; recommendations for management actions are provided in the text and then summarized at the end of this report. Also, provided to enhance review of this overview report and the detailed spreadsheet are the geographic regions figures and legend directly from the DEQ Summary Report. A few additional attachments are cited in specific sections later in the report.

Please note that all EPA positions in evaluating uplands source control status at the various sites/facilities is based on previous reviews of site-specific studies using "best professional judgment" (BPJ) and sound

scientific principles, available risk-based concentrations for evaluating contaminants of concern within the various migration and exposure pathways, and EPA Superfund Program directives and guidances, where appropriate. The attached spreadsheet provides a simple, color-coded "worry index" scheme based on "BPJ" for the outstanding sites/facilities within the Portland Harbor so that management can quickly ascertain those identified by the review team with the greatest need of future EPA resources.

ALBINA GEOGRAPHIC REGION

Most of the riverfront of the Albina Geographic Region lies within the study area for the River Mile 11 East (RM11E) Sediment Decision Unit (SDU). The attached spreadsheet outlines status of DEQ's efforts and existing EPA concerns for uplands source control work in this geographic region. In addition, EPA's previous review of the BES Outfall Basin Report identified PacifiCorp-Albina Substation (5117), Glacier Northwest (5449), and Cargill-Irving Grain Elevator (5561) as priority projects for EPA follow-up reviews; all of these have DEQ SCDs targeted in 2015. Of the 14 ECSI sites noted by DEQ as located within this geographic region, six sites are still completing Cleanup Program evaluations and do not have DEQ decision documentation. It is also noted that DEQ lists three sites in this geographic region as having "site controls pending effectiveness demonstrations".

Aside from the UPRR Albina facility (178) for which no information has been reviewed to date, the Early Action Team has recently been monitoring ongoing uplands source control work at all other sites in the RM11E area and has not identified any issue(s) requiring management action(s) at this time.

PEARL DISTRICT GEOGRAPHIC REGION

The Pearl District Geographic Region riverfront does not lie adjacent to a currently identified SDU. The attached spreadsheet outlines status of DEQ's efforts and existing EPA concerns for uplands source control work in this area. EPA's previous review of the BES Outfall Basin Report identified no priority projects in this geographic region for EPA follow up. Of the 18 ECSI sites noted by DEQ as located within this geographic region, one site is still completing Cleanup Program evaluations and does not have DEQ decision documentation; it should also be noted that an additional ECSI site – the Ambers Mill property (4590) – is currently not in the DEQ Cleanup Program. It is also noted that DEQ lists two sites in this geographic region as having "site controls pending effectiveness demonstrations".

Please note that for the Sulzer Pump facility (1235), any riverbank issues delineated by DEQ and highlighted in the Summary Report to be deemed a potential threat to river recontamination may need to be addressed under DEQ authorities/oversight as there may not be EPA-led in-water remedial actions in this area; it is recommended that this issue be a future topic for discussions between EPA and DEQ management once EPA finalizes plans for in-water cleanup actions.

SWAN ISLAND / MOCKS BOTTOM GEOGRAPHIC REGION

The Swan Island/Mocks Bottom Geographic Region lies for the most part adjacent to the Swan Island SDU; there is, however, a riverfront portion of Swan Island that is not located within this SDU, including some areas of the Portland Shipyard/Vigor facility (271) that lie along the Willamette River. The attached spreadsheet outlines status of DEQ's efforts and existing EPA concerns for uplands source control work in this area. In addition, EPA's previous review of the BES Outfall Basin Report identified the US NMCRC (5109), Fred Divine (2365), Freightliner Truck Plant (2366), Vigor Industries/Swan Island

Portland Shipyard (271), and Freightliner Parts Manufacturing Plant (115) as priority projects for EPA follow-up reviews; all, except for the US NMCRC (5109: discussed previously under EPA-led projects), have SCD targets in 2015 or 2017 [Vigor (271) only]. Of the 13 ECSI sites noted by DEQ as located within this geographic region, eight sites are still completing Cleanup Program evaluations and do not have DEQ decision documentation; these numbers do not include the previously-mentioned US NMCRC (5109). It is also noted that DEQ lists five sites in this geographic region as having "site controls pending effectiveness demonstrations".

The Vigor facility (271) is of high concern for the stormwater pathway as current BMPs have not allowed this facility meet NPDES permit requirements and plans are ongoing to address this issue; it is recommended that EPA management provide support to DEQ, if requested, in moving implementation of this critical stormwater management/treatment work forward in as timely a fashion as possible.

GUILDS LAKE GEOGRAPHIC REGION

The majority of the Guilds Lake Geographic Region lies adjacent to the RM9W SDU; the upstream portion that includes Port of Portland (PoP) Terminal 2 (2769) and the downstream portion, including the Glacier Northwest (2378) and Hampton Lumber (5761) facilities as part of the Front Avenue LLP site (1239), are excluded from this SDU. The attached spreadsheet outlines status of DEQ's efforts and existing EPA concerns for uplands source control work in this area. Furthermore, EPA's previous review of the BES Outfall Basin Report identified the following projects for EPA follow-up reviews (all have 2015 SCD target dates except where noted): Willbridge Railyard (3395); Glacier Northwest (2378), Hampton Lumber (5761), & Tube Forgings (all Front Avenue LLP Properties: 1239); Brazil (1026); Mt Hood Chemical (81); Calbag Metals (2454); Container Recovery (4015); Christensen Oil (2426); BNSF Railyard (100) w/ 2016 SCD target; Gunderson (1155) w/ 2016 SCD target; Wirfs Property (2424); Wilhelm Trucking (69); Container Management (4784) w/ 2016 SCD target; Carson Oil (1405); Galvanizers (1196); and Calbag Metals (5059). Of the 50 ECSI sites noted by DEQ as located within this geographic region, 16 sites are still completing Cleanup Program evaluations and do not have DEQ decision documentation; these numbers do not include the previously-mentioned Univar (RCRA-lead) facility (330) and it should also be noted that an additional ECSI site – Trumbull Asphalt Plant (1160) – is currently not in the DEQ Cleanup Program. It is also noted that DEQ lists 14 sites in this geographic region as having "site controls pending effectiveness demonstrations".

As noted in the data provided above, there are numerous sites with outstanding source control assessment, source control measures implementation, and effectiveness monitoring work in this geographic region. This area was identified by BES in their CoP outfalls assessment to have a number of operating facilities of concern for the stormwater pathway through discharge to CoP outfalls and on to the river. Many of those facilities are still working through the DEQ Program for stormwater pathway evaluation, a potential threat that was discovered/identified a number of years back. It is recommended that EPA management provide support to DEQ, if requested, in moving implementation of these critical stormwater management efforts in this area forward in as timely a fashion as possible.

ST JOHNS GEOGRAPHIC REGION

The majority of the St Johns Geographic Region lies adjacent to the RM6.5E and RM5.5E SDUs; the upstream portion, including the riverfront of the UoP Triangle Park site (277) and a riverfront portion of the McCormack and Baxter Superfund Site, are excluded from the RM6.5E SDU. The attached spreadsheet outlines status of DEQ's efforts and existing EPA concerns for uplands source control work in this area. EPA's previous review of the BES Outfall Basin Report review identified no priority projects

for EPA follow up in this area. Of the eight ECSI sites noted by DEQ as located within this geographic region, three sites are still completing Cleanup Program evaluations and do not have DEQ decision documentation; these numbers do not include the previously-mentioned McCormack and Baxter Superfund Site and the UoP Triangle Park site (277). It is also noted that DEQ lists no sites in this geographic region as having "site controls pending effectiveness demonstrations".

Please note that for Willamette Cove (2066), recently identified as an additional early action area with work to be led by DEQ, any riverbank work will be incorporated into in-water remedial actions in this area. Otherwise, the review team has not identified any issue(s) requiring management action(s) at this time.

DOANE LAKE / WILLBRIDGE GEOGRAPHIC REGION

The Doane Lake/Willbridge Geographic Region lies adjacent to the RM7W and RM6W SDUs; only a small portion of the McCall Oil facility (134) riverfront falls out of the RM7W SDU. The attached spreadsheet outlines status of DEQ's efforts and existing EPA concerns for uplands source control work in this area. Furthermore, EPA's previous review of the BES Outfall Basin Report identified Gasco (84), Siltronic (183), Rhone Poulenc (155), Arkema (398), Chevron (1549/25), and Conoco-Phillips (1549/177) as priority projects for EPA follow-up reviews; all have SCDs targeted in 2016, except the Willbridge Terminals (1549) – Chevron (25) and Conoco-Phillips (177) -- which have 2015 targets. Of the 16 ECSI sites noted by DEQ as located within this geographic region, nine sites are still completing Cleanup Program evaluations and do not have DEQ decision documentation; these numbers do not include the previously-mentioned Gould Superfund Site and the US Moorings facility (1641). It is also noted that DEQ lists 10 sites in this geographic region as having "site controls pending effectiveness demonstrations".

Within this geographic region there are some of the largest and most complex sites in the DEQ Cleanup Program for Portland Harbor. The Willbridge waterfront area is dominated by large active petroleum product terminals while the Doane Lake area was historically occupied by numerous heavy industrial facilities. As such, this is an area of major concern for the review team. Due to many factors, there have been slow advances to cleanup work in this area. As a result, it is recommended that management consider including within the Portland Harbor Superfund Site definition the Doane Lake area as such: along the riverfront from the former Atofina Chemicals facility (ie., Arkema: 398) downstream to the former Gasco facility (84) and inland to encompass the former Rhone Poulenc facility (155) and adjacent impacted environs of the former Doane Lake. The slow pace of work at many sites in this area, the magnitude of cleanups required at these sites and nearby environs, and the comingling of the numerous contaminants from various former operations is such that a Federal oversight role would provide a greater assurance that no legacy contamination in this area could affect the significant in-water cleanup efforts that are expected to be proposed in the adjacent RM7W and RM6W SDUs. To date EPA has expended more resources in reviews of ongoing uplands source control work for the Doane Lake area sites than any other DEQ geographic region at the Portland Harbor Superfund Site, supporting the recommendation to codify EPA's involvement with uplands cleanup work here in a more formal fashion.

T-4/INTERNATIONAL SLIP GEOGRAPHIC REGION

The entire T-4/International Slip Geographic Region lies adjacent to the RM5.5E, RM4.5E, and RM3.5E SDUs. The attached spreadsheet outlines status of DEQ's efforts and existing EPA concerns for uplands source control work in this area. EPA's previous review of the BES Outfall Basin Report identified Schnitzer Burgard Industrial Park (5324), Boydstun Metal Works (2362), and Portland Container Repair

(2375) as priority projects for EPA follow-up reviews; all of these sites are part of the Burgard Industrial Park and have SCDs targeted in 2016. Of the 21 ECSI sites noted by DEQ as located within this geographic region, 11 sites are still completing Cleanup Program evaluations and do not have DEQ decision documentation; it should also be noted that an additional ECSI site – Borden Chemical, Inc. (1277) – is currently not in the DEQ Cleanup Program. It is also noted that DEQ lists three sites in this geographic region as having "site controls pending effectiveness demonstrations".

The Early Action Team has not identified any issue(s) requiring EPA management action(s) at this time regarding the PoP Terminal 4. The Schnitzer Burgard Industrial Park (5324) and individual facilities (2362 & 2375) located there as noted above have been concerns due to lagging advancement of source control efforts. To date EPA has only seen a limited number of stormwater sampling work plans and data reports for the Burgard Industrial Park. It is recommended that EPA management provide support to DEQ, if requested, in moving implementation of critical stormwater management work forward in as timely a fashion as possible in this area.

LINNTON AREA GEOGRAPHIC REGION

The Linnton Area Geographic Region lies adjacent to the RM6W, RM5W, and RM3.9W SDUs; the PGE Harborton (2353), Alder Creek Lumber Co (2446), and ESCO Landfill (4409) are not located adjacent to a currently identified SDU. The attached spreadsheet outlines status of DEQ's efforts and existing EPA concerns for uplands source control work in this area. EPA's previous review of the BES Outfall Basin Report review identified no priority projects for EPA follow-up reviews in this geographic region due to the fact that no CoP outfalls drain this industrial area. Of the 18 ECSI sites noted by DEQ as located within this geographic region, five sites are still completing Cleanup Program evaluations and do not have DEQ decision documentation; it should also be noted that an additional ECSI site – Transloader International Company, LLC (2367) – is currently not in the DEQ Cleanup Program. It is also noted that DEQ lists four sites in this geographic region as having "site controls pending effectiveness demonstrations".

The review team has not identified any issue(s) requiring management action(s) at this time for the Linnton Area.

RIVERGATE GEOGRAPHIC REGION

The majority of the Rivergate Geographic Region lies within the RM2E SDU; the upstream and downstream portions, including the PoP Terminal 5 (1686) and the Ash Grove Cement (4696) facilities, are excluded from this SDU. The attached spreadsheet outlines status of DEQ's efforts and existing EPA concerns for uplands source control work in this area. Furthermore, EPA's previous review of the BES Outfall Basin Report identified Evraz Oregon Steel Mill (141) as well as Consolidated Metco (3295) as priority projects for EPA follow-up reviews; SCD targets are in 2016 and 2015, respectively, for these two sites. Of the six ECSI sites noted by DEQ as located within this geographic region, two sites are still completing Cleanup Program evaluations and do not have DEQ decision documentation; it should also be noted that two ECSI sites – Ash Grove Cement (4696) and JR Simplot (3343) – are currently not in the DEQ Cleanup Program. It is also noted that DEQ lists no sites in this geographic region as having "site controls pending effectiveness demonstrations".

The EOSM (141) facility has been an EPA priority site for the riverbank erosion, stormwater, and groundwater pathways; while stormwater treatment is in place and riverbank cleanup work will occur in 2015, additional monitoring needs to assess the nature and extent of a manganese (Mn) plume in ground

water have been delayed until riverbank actions are completed and EPA has established a final preliminary remediation goal for this metal. It is recommended that EPA management consider a path forward for EPA concerns with regards to the Mn plume as, to date, DEQ has not deemed this to be an issue for source control actions.

OUTFALLS

Oregon Department of Transportation (ODOT) outfalls/roadways (5437) and CoP outfalls (2425) are located within multiple geographic regions and SDUs. For the ODOT outfalls/roadways, EPA has not reviewed any information developed to date. For the CoP outfalls, EPA has reviewed the BES report and is in agreement with DEQ that all outfalls have been adequately evaluated and that at select outfalls monitoring will need to be implemented. As noted previously, it is recommended that EPA management support and provide assistance, as appropriate, to monitoring that is undergoing planning between DEQ and the BES that should provide further evaluation of the threat of outstanding site/facility projects for recontamination potential to the future in-water remedies.

THE DOWNTOWN REACH

On October 29, 2014 DEQ hosted EPA staff and management for a meeting on the status of DEQ's assessment and cleanup efforts within the Downtown Reach. DEQ had previously released two reports on their assessment work in this area and EPA had identified projects from review of these reports and requested to receive updates on DEQ's progress. The discussions at the meeting resulted in a cooperative effort to develop "talking points" on DEQ's findings to date and the ongoing work in the Downtown Reach; the "talking points" are provided as an attachment to this report. Cleanup sites that EPA will track progress on include the former Portland Gas Manufacturing facility (1138), two Portland General Electric sites (5249), and additional assessment work at other Downtown Reach locations. EPA will continue to evaluate DEQ's efforts in this upriver area for assurances that planned cleanups are accomplished in a timely fashion and prior to commencement of any in-water remedies at Portland Harbor. The review team has not identified any issue(s) requiring EPA management action(s) at this time regarding the Downtown Reach.

MONITORING NEEDS

As can be ascertained in a review of status of source control measures implementation in the attached spreadsheet, many sites have determined, designed, and implemented source control measures but have "effectiveness pending" notations. The report also notes DEQ's assessment of "site controls pending effectiveness demonstrations" by geographic regions. Overall, there is a lack of quality monitoring of the effectiveness of source control measures through the Portland Harbor. There has been a reluctance by many parties to collect data due to the ongoing "allocation process" for the in-water cleanup as well as a desire to "be done with it" with regards to source control work. Active facilities that require a CWA 1200-Z permit for stormwater discharges and/or a CWA industrial permit for process wastewater discharges are required to do monitoring of permitted discharges; however, not all contaminants of concern for the in-water cleanup are on the analytes list for these permits. Therefore, there is a need for a program to gather regular data to show effectiveness of uplands source control measures.

In the Summary Report there is a list of sites/facilities with "site controls pending effectiveness demonstration". Along with many of the sites/facilities in the attached spreadsheet, there are an additional five sites/facilities listed with monitoring needs to determine source control measure(s) effectiveness; all

of these have SCDs in place but for one reason or another (eg., currently under a CWA 1200-Z permit, redevelopment planned using the CoP Stormwater Management Manual, etc.) there is a need for additional monitoring. Also, please note that for many of the sites/facilities listed in the Summary Report with "site controls pending effectiveness demonstration", EPA has not been privy to any monitoring results to date. EPA has received semi-annual or annual monitoring reports from some of the sites/facilities and others are just beginning their effectiveness demonstrations but there are still quite a number of sites/facilities that are listed as "pending effectiveness demonstration" for which we have not received any monitoring data.

Currently, DEQ and BES are in talks regarding monitoring of select CoP outfalls and EPA has regularly attended these discussions. However, there is a need to get additional parties to take on an active role in longterm monitoring at Portland Harbor. Monitoring is the only means to change a site/facility's status from "effectiveness pending" to "effective source control measures currently in place." EPA will need to play a greater role in the near future in assisting DEQ to get parties to step up in the monitoring of their source control measures effectiveness.

CONCLUSIONS

As can readily be ascertained from the content of this report and the information summarized in the attached spreadsheet, there is quite a bit of work yet to be accomplished in uplands source control prior to initiation of any in-water remedies at the Portland Harbor Superfund Site. It is premature for EPA to concur with the DEQ position that "regardless of where in-water remedial actions are implemented in Portland Harbor and which cleanup levels are used to assess recontamination and risk to river receptors, source control efforts in the uplands surrounding and upstream of the study area will be completed sufficiently to prevent sediment recontamination and unacceptable risk to receptors from upland-related discharges." As has been shown at other sediment cleanup sites, uplands source control is a longterm effort required to assure that recontamination will be limited to the extent possible. While Portland Harbor has the benefit of control of almost all combined sewage overflows through the CoP "Big Pipe Project", the area is still an active industrial zone with the potential for future releases of contaminants to the river. Furthermore, as noted earlier, all historical sources may never be known and potential sources will likely continue to be discovered well into the future at Portland Harbor.

Having said all that, DEQ has made great progress since the signing of the JSCS in 2005 and should be commended for their efforts, especially with regards to the stormwater pathway. EPA management should consider the recommendations provided in this report and repeated below in order to assist DEQ in the furtherance of their uplands source control work.

COMPILATION OF RECOMMENDATIONS

CoP STORMWATER OUTFALLS -- It is recommended that EPA management support and provide assistance, as appropriate, to monitoring of select outfalls that is undergoing planning between DEQ and the CoP BES that should provide further evaluation of the threat of outstanding site/facility projects with recontamination potential to the future in-water remedies.

RECALCITRANT CLEANUP PROGRAM PROJECTS -- It is recommended that EPA management support and provide assistance, as appropriate, to advance any of the lagging projects so that uplands source control measures as well as SCDs can be in place prior to EPA's ROD.

US MOORINGS -- It is recommended that EPA management decide on whether to approach Corps management to address the stormwater evaluation data gap at this facility.

US NMCRC – It is recommended that EPA management decide on whether EPA resources will be allocated to approach the Navy to address the stormwater evaluation data gap at this facility.

SULZER PUMP – As current plans in development do not include in-water cleanup actions in this area, it is recommended that DEQ-led riverbank source control measures at this facility be a future topic for discussions between EPA and DEQ management once EPA finalizes plans for the in-water cleanup.

VIGOR -- It is recommended that EPA management provide support to DEQ, if requested, in moving implementation of the stormwater management/treatment work at this facility forward in as timely a fashion as possible.

GUILDS LAKE GEOGRAPHIC REGION, GENERAL -- It is recommended that EPA management provide support to DEQ, if requested, in moving implementation of critical stormwater management efforts forward in as timely a fashion as possible at recalcitrant facilities in this area.

DOANE LAKE AREA -- It is recommended that management consider including within the Portland Harbor Superfund Site definition the Doane Lake area as such: along the riverfront from the former Atofina Chemicals (ie., Arkema) facility downstream to the former Gasco facility and inland to encompass the former Rhone Poulenc facility and adjacent impacted environs of the former Doane Lake.

EVRAZ OREGON STEEL MILL -- It is recommended that EPA management consider a path forward for the EPA concerns with regards to the Mn plume as, to date, DEQ has not deemed this to be an issue for source control measures.